

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	KP 44-18	Wellbore No.	
Well Name	KP 44-18	Common Name	KP 44-18
Project	KP 18-06S-91W	Site	KP 34-18 Pad
Vertical Section Azimuth	68.47 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	6/22/2012	UWI	KP 44-18
Active Datum	KB @5,944.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	6/21/2012	Ended	
Tool Name	MWD	Engineer	

2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0.0	0.00	0.00	0.00	0.00	0.00

2.1.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/21/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/21/2012	NORMAL	106.0	1.50	75.50	105.99	0.35	1.34	1.38	1.42	1.42	0.00	75.50
	NORMAL	130.0	2.11	65.74	129.98	0.61	2.05	2.13	2.84	2.54	-40.67	328.32
	NORMAL	166.0	2.29	61.44	165.95	1.22	3.29	3.51	0.68	0.50	-11.94	315.32
	NORMAL	197.0	2.55	62.93	196.92	1.83	4.44	4.81	0.86	0.84	4.81	14.35
6/22/2012	NORMAL	227.0	2.55	69.61	226.89	2.37	5.66	6.14	0.99	0.00	22.27	93.34
	NORMAL	257.0	3.08	68.55	256.86	2.90	7.04	7.61	1.78	1.77	-3.53	353.86
	NORMAL	287.0	4.05	64.51	286.80	3.65	8.75	9.47	3.34	3.23	-13.47	343.46
	NORMAL	318.0	5.28	68.64	317.69	4.64	11.06	11.99	4.11	3.97	13.32	17.34
	NORMAL	348.0	6.51	70.75	347.54	5.70	13.95	15.07	4.16	4.10	7.03	11.04
	NORMAL	378.0	7.48	70.14	377.31	6.93	17.40	18.72	3.24	3.23	-2.03	355.32
	NORMAL	408.0	8.62	71.28	407.02	8.31	21.36	22.92	3.84	3.80	3.80	8.54
	NORMAL	439.0	9.85	69.79	437.61	9.97	26.05	27.89	4.04	3.97	-4.81	348.26
	NORMAL	479.0	11.78	67.08	476.90	12.75	33.02	35.40	4.99	4.83	-6.77	343.91
	NORMAL	510.0	12.66	66.73	507.20	15.32	39.06	41.96	2.85	2.84	-1.13	355.02
	NORMAL	600.0	15.92	68.58	594.40	23.73	59.61	64.16	3.66	3.62	2.06	8.87
6/23/2012	NORMAL	691.0	17.50	69.19	681.56	33.15	84.02	90.33	1.75	1.74	0.67	6.63
	NORMAL	782.0	19.70	67.26	767.80	43.94	110.96	119.34	2.51	2.42	-2.12	343.45
	NORMAL	873.0	22.51	68.14	852.69	56.35	141.28	152.11	3.11	3.09	0.97	6.85
	NORMAL	965.0	25.24	67.70	936.81	70.36	175.78	189.34	2.97	2.97	-0.48	356.07
	NORMAL	1,060.0	27.52	69.63	1,021.91	85.68	215.10	231.54	2.56	2.40	2.03	21.48

2.1.2 Survey Stations (Continued)

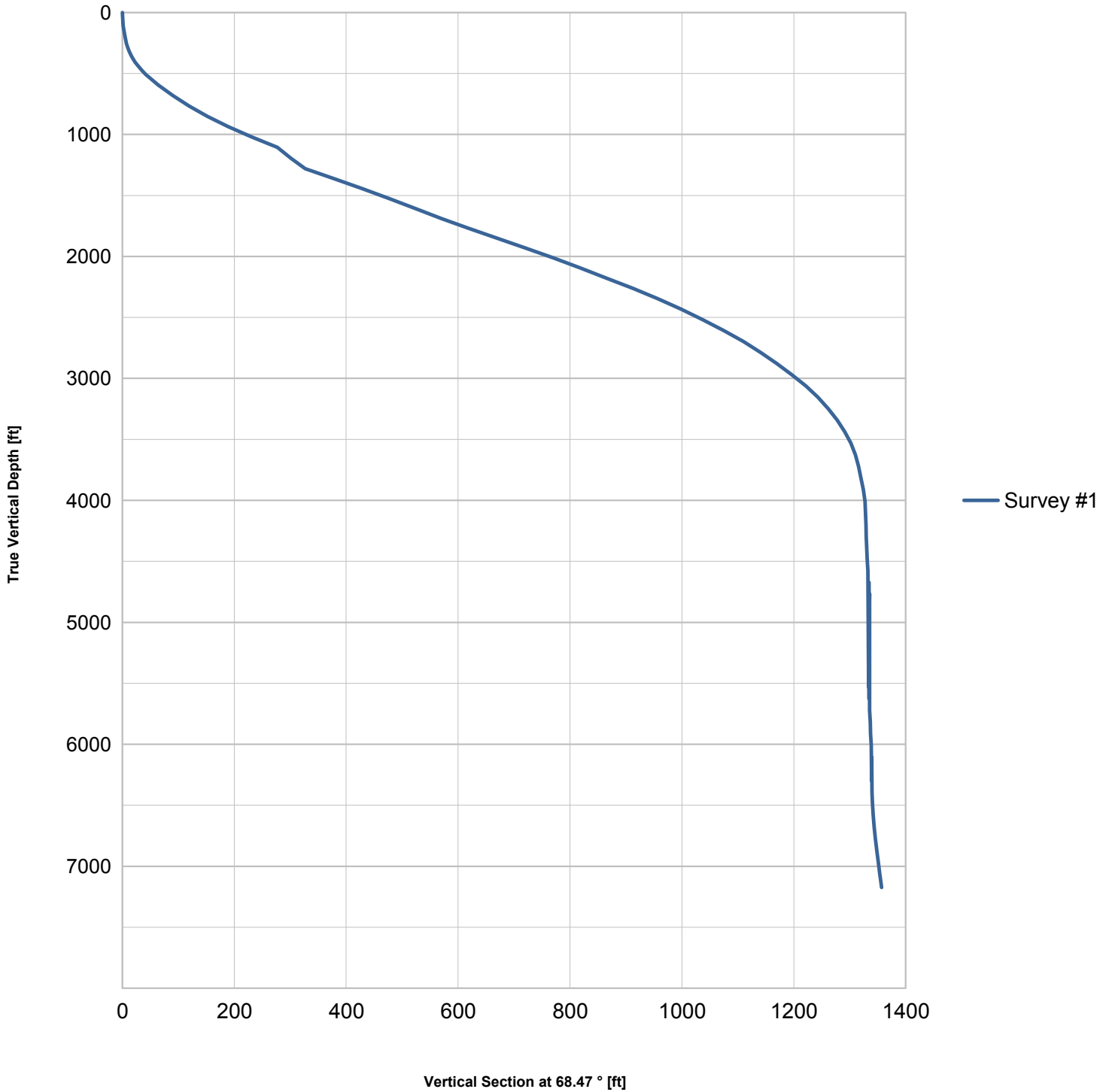
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/23/2012	NORMAL	1,155.0	29.90	69.10	1,105.22	101.77	257.80	277.16	2.52	2.51	-0.56	353.66
	NORMAL	1,250.0			1,195.97	110.42	280.44	301.39	31.47	-31.47	0.00	180.00
6/24/2012	NORMAL	1,340.0	33.06	66.64	1,281.06	120.43	303.62	326.63	36.73	36.73	0.00	66.64
	NORMAL	1,435.0	31.57	67.70	1,361.34	140.14	350.42	377.40	1.68	-1.57	1.12	159.63
	NORMAL	1,530.0	31.83	66.47	1,442.17	159.58	396.40	427.30	0.73	0.27	-1.29	291.39
	NORMAL	1,626.0	29.63	68.93	1,524.69	178.22	441.76	476.34	2.64	-2.29	2.56	151.31
	NORMAL	1,721.0	29.72	71.56	1,607.24	194.11	486.02	523.34	1.37	0.09	2.77	87.19
	NORMAL	1,816.0	29.81	69.45	1,689.70	209.85	530.47	570.47	1.11	0.09	-2.22	273.99
	NORMAL	1,911.0	31.83	69.45	1,771.28	226.94	576.04	619.13	2.13	2.13	0.00	0.00
	NORMAL	2,006.0	32.80	68.22	1,851.57	245.28	623.39	669.91	1.23	1.02	-1.29	325.35
	NORMAL	2,101.0	31.92	69.81	1,931.82	263.49	670.86	720.75	1.29	-0.93	1.67	136.63
	NORMAL	2,196.0	31.13	69.81	2,012.80	280.64	717.48	770.41	0.83	-0.83	0.00	180.00
	NORMAL	2,291.0	29.37	69.10	2,094.86	297.42	762.30	818.26	1.89	-1.85	-0.75	191.18
	NORMAL	2,387.0	29.72	67.34	2,178.38	314.99	806.25	865.59	0.97	0.36	-1.83	291.20
	NORMAL	2,483.0	28.75	66.82	2,262.15	333.25	849.44	912.46	1.04	-1.01	-0.54	194.45
	NORMAL	2,578.0	26.64	66.64	2,346.26	350.69	889.99	956.59	2.22	-2.22	-0.19	182.19
	NORMAL	2,673.0	24.90	68.00	2,431.81	366.62	928.09	997.88	1.93	-1.83	1.43	161.84
	NORMAL	2,769.0	23.83	70.33	2,519.26	380.72	965.09	1,037.48	1.50	-1.11	2.43	139.12
	NORMAL	2,865.0	22.16	68.93	2,607.63	393.76	1,000.25	1,074.97	1.83	-1.74	-1.46	197.49
	NORMAL	2,961.0	19.87	67.52	2,697.24	406.51	1,032.23	1,109.39	2.44	-2.39	-1.47	191.79
	NORMAL	3,056.0	18.64	69.28	2,786.92	418.06	1,061.35	1,140.71	1.43	-1.29	1.85	155.57
	NORMAL	3,151.0	16.36	67.87	2,877.52	428.47	1,087.94	1,169.28	2.44	-2.40	-1.48	189.86
	NORMAL	3,247.0	16.53	67.34	2,969.59	438.82	1,113.07	1,196.45	0.24	0.18	-0.55	318.31
	NORMAL	3,342.0	14.16	70.86	3,061.20	447.84	1,136.52	1,221.58	2.68	-2.49	3.71	160.23
	NORMAL	3,437.0	11.87	71.39	3,153.75	454.77	1,156.76	1,242.95	2.41	-2.41	0.56	177.27
	NORMAL	3,533.0	10.46	68.40	3,247.94	461.13	1,174.22	1,261.52	1.59	-1.47	-3.11	200.86
	NORMAL	3,628.0	8.62	66.82	3,341.62	467.11	1,188.79	1,277.26	1.96	-1.94	-1.66	187.32
	NORMAL	3,724.0	7.56	69.28	3,436.66	472.17	1,201.31	1,290.77	1.16	-1.10	2.56	163.13
	NORMAL	3,819.0	5.80	75.08	3,531.01	475.62	1,211.79	1,301.79	1.98	-1.85	6.11	161.89
	NORMAL	3,915.0	4.22	77.54	3,626.64	477.63	1,219.93	1,310.10	1.66	-1.65	2.56	173.48
	NORMAL	4,010.0	2.64	77.89	3,721.47	478.84	1,225.48	1,315.71	1.66	-1.66	0.37	179.42
	NORMAL	4,106.0	2.73	82.64	3,817.37	479.60	1,229.91	1,320.10	0.25	0.09	4.95	70.36
	NORMAL	4,200.0	2.81	90.55	3,911.26	479.87	1,234.44	1,324.41	0.42	0.09	8.41	82.15
	NORMAL	4,296.0	1.05	122.54	4,007.20	479.37	1,237.53	1,327.11	2.08	-1.83	33.32	163.84
	NORMAL	4,392.0	0.79	101.80	4,103.19	478.76	1,238.92	1,328.18	0.44	-0.27	-21.60	221.96
6/25/2012	NORMAL	4,487.0	0.62	123.95	4,198.18	478.34	1,239.99	1,329.01	0.33	-0.18	23.32	132.71
	NORMAL	4,583.0	0.97	140.47	4,294.17	477.42	1,240.94	1,329.56	0.43	0.36	17.21	41.66
	NORMAL	4,676.0	0.70	23.22	4,387.17	477.34	1,241.66	1,330.20	1.54	-0.29	-126.08	205.75
	NORMAL	4,771.0	0.70	51.88	4,482.16	478.23	1,242.35	1,331.17	0.36	0.00	30.17	104.33
	NORMAL	4,866.0	1.05	90.37	4,577.15	478.58	1,243.67	1,332.53	0.70	0.37	40.52	79.43
	NORMAL	4,960.0	1.23	60.84	4,671.13	479.07	1,245.42	1,334.33	0.65	0.19	-31.41	271.91
	NORMAL	5,056.0	0.26	167.89	4,767.12	479.36	1,246.36	1,335.32	1.39	-1.01	111.51	169.22
	NORMAL	5,152.0	0.53	174.57	4,863.12	478.70	1,246.45	1,335.16	0.28	0.28	6.96	13.03
	NORMAL	5,247.0	0.88	178.44	4,958.11	477.54	1,246.51	1,334.79	0.37	0.37	4.07	9.69
	NORMAL	5,343.0	0.44	162.62	5,054.11	476.45	1,246.64	1,334.51	0.49	-0.46	-16.48	194.72
	NORMAL	5,438.0	0.09	208.85	5,149.11	476.03	1,246.71	1,334.42	0.40	-0.37	48.66	170.24
	NORMAL	5,534.0	0.44	147.32	5,245.11	475.66	1,246.88	1,334.44	0.42	0.36	-64.09	287.20
	NORMAL	5,629.0	0.35	190.92	5,340.10	475.07	1,247.02	1,334.35	0.32	-0.09	45.89	127.70
	NORMAL	5,725.0	0.44	318.89	5,436.10	475.06	1,246.72	1,334.07	0.74	0.09	133.30	150.80
	NORMAL	5,821.0	0.62	334.18	5,532.10	475.80	1,246.25	1,333.91	0.24	0.19	15.93	45.97
	NORMAL	5,916.0	0.79	43.79	5,627.09	476.74	1,246.48	1,334.47	0.86	0.18	73.27	114.96
	NORMAL	6,012.0	0.70	54.69	5,723.09	477.55	1,247.42	1,335.64	0.17	-0.09	11.35	127.79
	NORMAL	6,107.0	0.44	82.64	5,818.08	477.94	1,248.25	1,336.55	0.39	-0.27	29.42	146.48
6/26/2012	NORMAL	6,202.0	0.53	55.22	5,913.08	478.23	1,248.98	1,337.33	0.26	0.09	-28.86	277.11
	NORMAL	6,298.0	0.97	92.48	6,009.07	478.45	1,250.15	1,338.51	0.66	0.46	38.81	67.60
	NORMAL	6,394.0	0.09	261.23	6,105.07	478.40	1,250.89	1,339.18	1.10	-0.92	175.78	179.05
	NORMAL	6,490.0	0.18	199.18	6,201.06	478.25	1,250.77	1,339.01	0.17	0.09	-64.64	267.97

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/26/2012	NORMAL	6,585.0	0.26	19.18	6,296.06	478.31	1,250.79	1,339.05	0.46	0.08	189.47	180.00
	NORMAL	6,680.0	0.53	33.77	6,391.06	478.88	1,251.10	1,339.55	0.30	0.28	15.36	27.83
	NORMAL	6,775.0	0.88	21.29	6,486.06	479.93	1,251.61	1,340.41	0.40	0.37	-13.14	329.99
	NORMAL	6,869.0	1.41	26.56	6,580.04	481.63	1,252.39	1,341.76	0.57	0.56	5.61	13.88
	NORMAL	6,965.0	1.58	19.18	6,676.00	483.94	1,253.35	1,343.50	0.27	0.18	-7.69	307.71
	NORMAL	7,061.0	2.81	15.49	6,771.93	487.46	1,254.42	1,345.78	1.29	1.28	-3.84	351.60
6/27/2012	NORMAL	7,176.0	2.46	11.97	6,886.81	492.59	1,255.68	1,348.84	0.34	-0.30	-3.06	203.06
	NORMAL	7,251.0	2.37	20.94	6,961.74	495.61	1,256.57	1,350.78	0.52	-0.12	11.96	107.85
	NORMAL	7,347.0	2.29	31.66	7,057.66	499.10	1,258.29	1,353.65	0.46	-0.08	11.17	105.73
	NORMAL	7,418.0	2.11	26.91	7,128.61	501.47	1,259.62	1,355.77	0.36	-0.25	-6.69	223.01
	NORMAL	7,463.0	2.11	26.91	7,173.58	502.95	1,260.37	1,357.01	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

